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REALISTICALLY IMAGINING THE INTERNET: OVERCOMING (MIS)PERCEPTIONS WHEN EDUCATING POLICYMAKERS AND THE PUBLIC

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Public portrayals of the Internet, particularly through entertainment products, can have a profound influence on the public's understanding of technology and the ability of national legislators to develop meaningful technology policies via objective analysis and discussion. As the Internet, including mobile networks, social media, and the emerging "Internet of Things" continue to become ever more tightly interwoven into the fabric of everyday life, it is imperative to ensure those charged with its oversight (who often are non-specialists or even self-proclaimed 'luddites') base their understanding of the Internet on fact, not fiction -- and also possess an objective, if even fundamental, understanding of both technology's potential benefits and potential pitfalls.

For example, although the 'Hollywood' stereotype of the hacker has grown from the socially inept (white, male) characters portrayed in films like 'Wargames' and 'Sneakers' to the socially marginalized, or deliberately self-exiled (and slightly more diverse) representations such as 'Abi Sciuto' on TV's NCIS or 'Lisbeth Salander' from Stieg Larsson's Millennium Trilogy (both books and film), the 'hacker' is still fetishized as the 'other.' By contrast, there remains only a very limited range of representations of those with exceptional understanding of the Internet (i.e., 'hackers') depicted as ordinary people existing within then-acceptable societal norms.

As such, the still-dominant imagining (both in public and policy arenas) is the hacker-as-other, as a deviant, as one to be feared. Situations then arise that depict just how deeply such perceptions and narratives of deviance have permeated the public psyche and underlie the discourse when developing national Internet policy; one only needs to observe legislative bodies deliberating Internet policy or watch mainstream news media reporting on the heterogeneous, amorphous 'hacker' entity known as Anonymous for examples of this.

Moreover, how the Internet itself is depicted in popular culture can influence long-term popular perceptions. For example, both the original 'Tron' (1982) and its 2010 reboot presented the 'digital world' as a wire-framed environment reminiscent of the physical

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world. Similarly, 1995's 'Hackers' envisioned both the Internet and a single computer's own file system as a swirling 'city' of geometric shapes that one could 'fly' through to locate data or reach other systems. For those not immersed in the functioning of digital environments, such comfortable urban metaphors help to make sense of the digital world.

Metaphors such as these help frame popular perceptions over what constitutes the Internet and cyberspace – and by extension how societal issues regarding these domains, such as Internet security concerns, are presented to policymakers and the public, often in a fear-inducing manner. A wire-framed city can imply hacking as penetration, the black-clad figure (frequently and sensationally referred to as a 'ninja') climbing in the metaphorical digital window, clearly up to no good. Perhaps nothing contributes to this fear as the oft-used exclamation "I'm in!" heard in movies and television programs after a 'hacker' penetrates a computer system by typing a single command such as 'Lower Firewall NOW.'

However, we posit that as the Internet (particularly mobile networks and the Internet of Things) become 'invisible technologies' such metaphors soon will do more harm than good in developing effective and meaningful Internet policy. Repeat a lie—or in this case, inaccurate stereotypes or metrics of dubious accuracy—often enough and the public will accept it as truth. Consequently, those images and perspectives, rightly or wrongly, become part of the social consciousness, shape what is interpreted as reality, and may influence critical global deliberations over technology policy. Overcoming this phenomenon is a formidable task.

National lawmakers in particular are susceptible to this type of perceptual misalignment. For example, in hearings related to the reintroduction of the controversial Cyber Intelligence Sharing and Protection Act (CISPA) in 2014, Congressman Mike Rogers invoked images of naive teenagers tweeting from their parent's basement[1] when dismissing well-informed opposition to his proposal on its privacy-invading provisions. Similarly, his colleagues in New Zealand, in attempting to push through new hard-line anti-copyright legislation used a more dystopian vision, with one Conservative MP, Jonathan Young saying in the House of Representatives, "[d]o you remember the movie, 'the Terminator' ... I'm sure that you do, and the computer system called Skynet that ruled the world, is like the internet today." [2] Such media-fuelled perceptions about technology allowed the so-called "Three Strikes" anti-piracy proposal to become law, despite the news reports later describing his party's attempts at understanding the Internet as akin to "a washing machine trying to explain love to a ceiling tile." [3] Or, in attempting to strengthen copyright controls over Internet content in 2013, American lawmakers did not realize (or chose to ignore) warnings from the Internet industry that several of its proposals would, if implemented, "break the Internet"—or the very least hinder its normal functions, especially for those performing systems administration or Internet security duties. [4] A similar proposal in New Zealand was marred by references to 'stealing from the vege patch' which betrayed a repeatedly disproved link between the nature of digital and physical goods viz-a-viz concepts of property ownership and theft. [5]

Such cognitive misperceptions are particularly evident in the debate over online privacy.

From Australia to America, the post-Snowden debate about the collection of electronic metadata is ensnared between politicians who frame it as “armless bits of information and experienced technologists and security specialists demonstrating the immense potential harms associated with its collection by governments. Further, in 2015, FBI Director James Comey reignited what many call the "Crypto Wars" by publicly suggesting that government-mandated technical 'backdoor' vulnerabilities in computers and cryptographic systems would only allow authorized law enforcement entities to access protected information, but somehow not criminals.[6] While perhaps an enticing tool for a movie plot, statements and beliefs like these run contrary to proven knowledge about how computers and mathematical cryptography function in reality. They also fail to acknowledge that some of the biggest Internet security threats may not be the stereotypical ‘weird kids in basements’ but rather sophisticated technical teams working on behalf of nation-states for internationally significant political, economic, or military goals.

Simplistic or sensationalized depictions of the Internet can lead national lawmakers and the public to develop unrealistic expectations or understandings about the Internet’s capabilities, functions, or what indeed are necessary and vital items to consider as solutions to its potential shortcomings. Failing to counter such misconceptions or misplaced beliefs can contribute to bad, if not also dangerous, Internet policy and disastrous technical outcomes.

This paper will explore the correlations between popular Internet imaginings and global technology policy events by asking how these cognitive disconnects can be overcome to foster better understanding of the Internet by global society. and especially by its elected officials. Can we prevent another oversimplified "the Internet is a series of tubes" moment to ensure that knowledge about the Internet, cyberspace, and its related technologies used in crafting Internet policy remains based on fact and reality instead of stereotypes, fantasy, or wishful thinking?

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